**Listing of Claims:**

1. (Currently amended) A method for ~~recovering~~ isolating mesenchymal stem cells from bone marrow aspirate, comprising:

(a) providing a cell mixture comprising mesenchymal stem cells and other cells in a culture medium, said the culturing medium containing factors that stimulate mesenchymal stem cell growth without differentiation and allowing for the selective adherence of only the mesenchymal stem cells to substrate surface;

(b) seeding and culturing the cell mixture in a culture device comprising an upper plate with pores and a lower plate base ~~to separate mesenchymal stem cells from other cells through the pores, wherein the mesenchymal stem cells retain and adhere onto the upper plate, and the other small-sized cells pass through the pores to the lower plate base, wherein the mesenchymal stem cells retain and adhere onto the upper plate, and the other small-sized cells pass through the pores to the lower plate base~~, said the upper plate, made of the mesenchymal stem cell adhering material, where mesenchymal stem cells adhered and cultured, and the lower plate base, where the other small-sized cells adhered following passing through the pores in the upper plate; and

~~(c) culturing the mesenchymal stem cells on the upper plate; and~~

~~(d)~~ (c) removing ~~additional~~ non-adherent cells on the upper plate by changing medium ~~and recovering the mesenchymal stem cells from the upper plate~~.

2. (Canceled)

3. (Canceled)

4. (Previously presented) The method as claimed in claim 1, wherein the cell

mixture comprises mammalian mesenchymal stem cells.

5. (Canceled)

6. (Previously presented) The method as claimed in claim 4, wherein the cell mixture comprises human mesenchymal stem cells.

7. (Canceled)

8. (Canceled)

9. (Previously presented) The method as claimed in claim 1, wherein the mesenchymal stem cells can differentiate into tissues comprising bone, adipose, or cartilage.

10. (Previously presented) The method as claimed in claim 1, wherein the mesenchymal stem cells are characterized by CD34-.

11. (Currently amended) The method as claimed in claim ~~9~~ 1, wherein the culture medium is 10% fetal bovine serum-supplemented Dulbecco's modified Eagle's medium containing 1 g/L of glucose.

12. (Withdrawn) An isolated mesenchymal stem cell recovered by the method as claimed in claim 1, which has the capability of self-renewal and pluripotent differentiation.

13. (Withdrawn) The mesenchymal stem cell as claimed in claim 12, which can differentiate into tissue comprising bone, adipose, or cartilage.

14. (Withdrawn) The mesenchymal stem cell as claimed in claim 12, which is characterized by CD34-.

15. (Withdrawn) A composition comprising the mesenchymal stem cell as claimed in claim 12 and a culture medium, wherein the medium expands the mesenchymal stem cell.

16. (Withdrawn) The composition as claimed in claim 15, wherein the mesenchymal stem cell is characterized by CD34-.

17. (Withdrawn) The composition as claimed in claim 15, wherein the medium comprises DMEM-LG medium containing 10% fetal bovine serum.

18. (Withdrawn) A pharmaceutical composition comprising the mesenchymal stem cell as claimed in claim 12 and a pharmaceutically acceptable carrier, wherein the mesenchymal stem cell is present in an amount sufficient to serve as tissue replacement or gene therapy for tissue damaged by age, trauma, and disease.

19. (Withdrawn) A pharmaceutical composition as claimed in claim 18, wherein the mesenchymal stem cell can differentiate into tissues comprising bone, adipose, or cartilage.

20. (Withdrawn) A composition comprising as claimed in claim 18, wherein the

mesenchymal stem cell is characterized by CD34-.

21-31. (Canceled)

32. (Withdrawn) the method as claimed in claim 1, further comprising, after step (b), a step of removing cells not adhered on the plate by changing a culture medium.

33. (Previously presented) The method as claimed in claim 1, wherein said pores are about 0.4 to 40 microns in diameter.

34. (new) the method as claimed in claim 1, wherein said the mesenchymal stem cell adhering material is plastic.

35. (new) the method as claimed in claim 1, wherein said the mesenchymal stem cells cultured until confluence.

36. (new) the method as claimed in claim 35, said recovering the confluent mesenchymal stem cells for further re-plating to expand the mesenchymal stem cells.

37. (new) the method as claimed in claim 36, wherein said recovering the mesenchymal stem cells from the upper plate by using trypsin-EDTA.

38. (new) the method as claimed in claim 36, said re-plating the cells at a density of 4.times.10.sup.3-10.sup.4/cm.sup.2.